

**ITIC**International Tsunami Information Centre  
The information services of the ITSU programme

## **IOC Products and Services**

**IOTWS Communications Plan****Alert, Earthquake****Sea Level display/stations****Tsunami event data**

Laura Kong, Director, ITIC  
ICG/IOTWS-III  
Bali, Indonesia, 31 Jul - 2 Aug 2006

1

## **Communications Plan for Interim Advisory Information System the Indian Ocean Region, vers 16 Jan 2006**

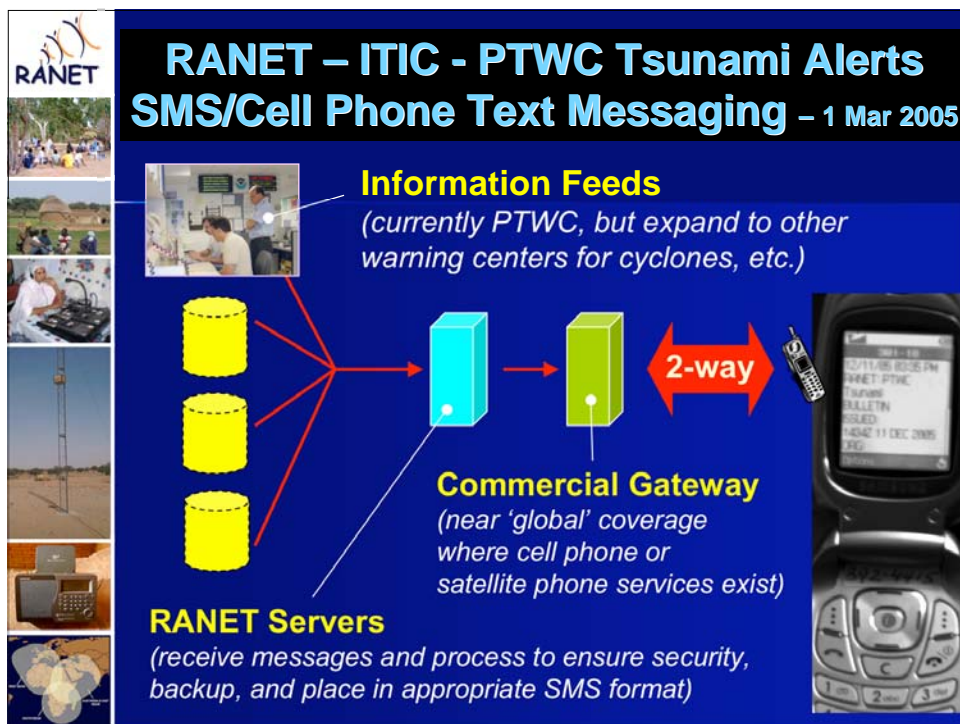


- **Interim advisories** by PTWC, JMA
- **10-20 min** after earthquake based on seismic information  
Since April 2005, 13 events - PTWC (16 min), JMA (24 min)  
Under SOP, PTWC takes lead, followed by JMA msg
- As sea level stations are installed, advisories based on tsunami confirmation to be issued
- Consistent format and wording of message
- Consistent reporting of earthquake location and magnitude
- Communications Test 4x/year  
TWC requests confirmation that links working

### **Actions Tasks:**

IOC/PTWC/JMA: Update Comm Plan (stations, TWFP, svcs)

IOTWS Member States: Review Tsunami Warning Focal Point  
Updates to IOC, JMA



**RANET – ITIC - PTWC Tsunami Alerts  
SMS/Cell Phone Text Messaging**

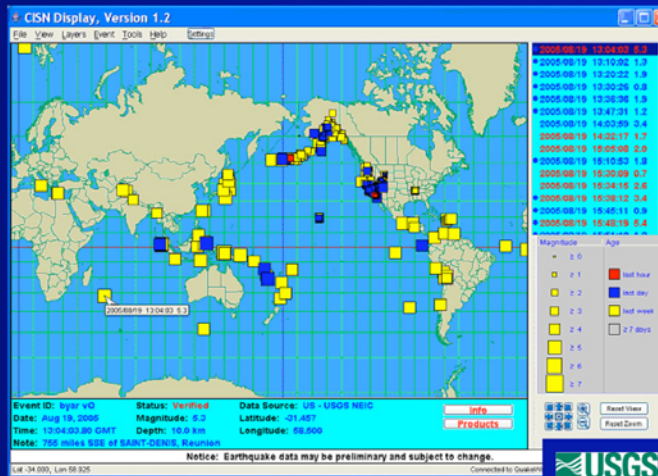
**What the SMS system IS NOT:**

- **Not meant to replace existing and formal/official** means of communicating alerts or critical information.
- **Not meant to become the sole means** of receiving critical alert information – warnings and communication should come through a 'layered' approach.
- **Not meant to be mass-public communication system** for national official / disaster managers, international organizations needing to be notified
- **Coverage: Africa, IO, Pacific, Central America**
- **Pilot - contact** [I.kong@unesco.org](mailto:I.kong@unesco.org), [raw-sma@ranetproject.net](mailto:raw-sma@ranetproject.net)

## Alert Services Real-Time Earthquake Display and Alert System (USGS – US NTHMP)



Multi-platform  
Internet  
EQ broadcast  
Alert system  
(page, email)  
GIS  
Tsunami  
Warning



## Alert Services Real-time Earthquake Display and Alert System (USGS – US NTHMP)

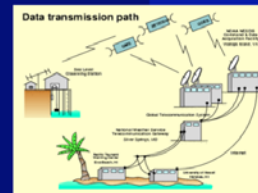


- Further enhancements (2006, v2.0):
- Integrated Display and Emailer with text messaging
- Tsunami Warning Message alerting – RED flashing
- Tsunami travel time / model layers
- Improved customization, GIS data layering, include raster images (currently vector only)
- **SIGN-UP: ITIC will be local administrator**
- **Send email to [itic.tsunami@noaa.gov](mailto:itic.tsunami@noaa.gov)**

# IO GLOSS Sea Level Data Display

## What (PTWC-supported tool):

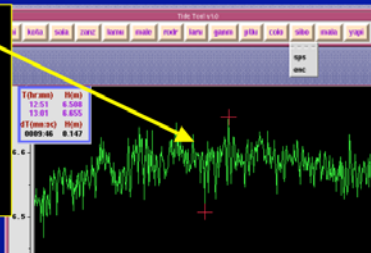
- **Decode, Display, Manipulate** (expand, measure period/amplitude) satellite-transmitted sea level data
- **Open-source** shell programming, graphics (Tcl/Tk, BLT extension), PC, Linux, Unix
- Continuously downloaded data (from GTS)
- **Continuously decodes** satellite data, creating station time series files



```

91642 46/// /1205 10296 40080 22200 00287
555 77744 A0102 516 3 60029 6315B 03024 83030 00A07 02548 02901 29631 6B090
24520 2400A 13025 90036 00297 317B1 50240 60310 0A190 26230 38002 96317
B2102 37103 100A2 50266 50330 02973 18B27 02331 02800 A3102 70103 10029
8318B 33022 92026 00A37 02736 03401 29831 8B390 22570 2801A 43027 66028
00299 319B4 50222 50230 0A490 27960 34002 98319 B5102 19202 901A5 50282
20380 02983 19B57 02163 03200 BV289 13451 41249 C0501 22080 00070 23677 44777=

^*33487552
206011307M94168411DZpQ*@@@r10uW@1[Am@-@B@BYB1AG@B@BYBzAM@B@BZCUAB@B@
BZCmA@@BmBZDMAI@BIBZDrAG@BIBZD?AD@BkBZETAL@BjBZEWAGABhBZ"@qv@eL3@
[DvAI4B]5Ad6a=OE0uVW>ZAnA|BYBkCRCqCsDWDnER"@us@so0uVV>YCqC7DBctDSD|DnD
xEGEa"@wh@wB
_OLAoP 50+1NN 116W
    
```



## Sea level Station Monitoring

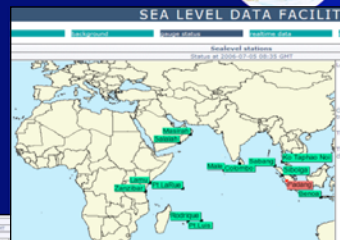


**WHAT** <http://w2.vliz.be/vmdccdata/iode:ODINAFRICA> (IOC) Sea Level Data Facility  
7/24 Monitoring - Africa network



## HOW:

**GTS data feed - Belgium Met**  
**Auto decode, archive (PTWC)**  
**User-friendly**  
**Network status**  
**Real time data display**  
**Station metadata**



## STATUS:

**Prototype, official launch - end 2006**  
**IOTWS Regional SL Network included temporarily**  
**To continue, IOTWS countries request to IOC**



# Preserving Critical Tsunami Information

- **Reconnaissance teams visit affected areas after tsunami events**
  - Gather critical info including
    - Estimates of runup, scour, beach erosion, etc.
    - Physical measurements of damage
    - Eyewitness accounts
  - This info “disappears” if not gathered immediately
- **Why?**  
Observations benchmark models → Better mitigation



## Tsunami Reconnaissance Data Repository

hosted by San Diego Supercomputer  
mirror site IOC IODE, Belgium



- **New digital repository for reconnaissance data - Dec. 26<sup>th</sup> tsunami**
  - Centralized archive with backup and preservation capabilities
  - User-friendly tools for searching / exploring / analyzing / extracting data
  - Curated by experts
  - Ability for community to add commentary
- **Developed as part of US NSF NEES program**
  - George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES)
- **Support efforts of IUGG Tsunami Commission data collection by providing archiving facility**

10

## Tsunami Data Preservation Goals

- **Preserve key data 26 Dec tsunami**
  - would otherwise be scattered or lost
- **In future, facility can preserve all tsunami data**
- **Make data widely accessible via Web interface /tools**
  - in ways that make sense to non-specialists
- **Add methods/tools compatible with emerging standards**
  - so data can be cross-analyzed w/other sources



## How You Can Help? *contact I.kong@unesco.org*

- **Contribute relevant data from the international tsunami community**
  - Maps and satellite imagery
  - Topographic and bathymetry data
  - Images and videos
  - Field measurements (inundation data, beach profiles, scour data, land uplift/subsidence, etc)
  - Post-event questionnaires and surveys
  - Recorded tsunami data (e.g., tide gauges)
  - Observations of damage to buildings and infrastructure
  - Eyewitness accounts and personal interviews
  - Casualties and other social impact statistics